

## **Appendix L**

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### Electric and Magnetic Fields Tables



## Appendix L – Electric and Magnetic Fields Tables

**Table L-1. ENVIRO Modeling Inputs for the Environmental Effects Analysis – Projected Electrical Power Flows, Conductor Size and Type, and Operating Voltage**

Segment/Circuit	Double Circuit (Proposed Action is to build single circuit at this time)		Single Circuit	Double Circuit	
	N/A	230 kV Circuit (Looking north, right side circuit built and energized)	230 kV	New SJBEC 230 kV Circuit 1 (Looking north, left side circuit)	Existing Iron Horse 115 kV Circuit 2 (Looking north, right side circuit)
Conductor Number/Type	N/A	One conductor 1272 MCM 45/7 ACSR Bittern <sup>1</sup>	One conductor 1272 MCM 45/7 ACSR Bittern <sup>1</sup>	One conductor 1272 MCM 45/7 ACSR Bittern <sup>1</sup>	One conductor 477 MCM 26/7 ACSR Hawk <sup>2</sup>
Typical Initial Minimum (Amperes)	N/A	502	502	502	80
Typical Initial Peak (Amperes)	N/A	635	635	635	80
Typical Future Peak (Amperes)	N/A	N/A	N/A	635	105

Note: The environmental effects analysis for electric and magnetic fields can be found in Section 3.20 of the Draft EIS.

<sup>1</sup> 1272 MCM 45/7 ACSR Bittern conductor has a diameter of 1.345 inches. Conductor Type is used for Shielding Type because Shielding Type (single 0.654" diameter 48 fiber OPGW with a short circuit rating of 167 kA<sup>2</sup>\*s for first circuit, and single 7/16-inch diameter shield wire for any second or future circuit) is not available in ENVIRO database.

<sup>2</sup> 477 MCM 26/7 ACSR Hawk conductor has a diameter of 0.858 inches. Conductor Type is used for Shielding Type because Shielding Type (single 0.654" diameter 48 fiber OPGW with a short circuit rating of 167 kA<sup>2</sup>\*s for first circuit, and single 7/16-inch diameter shield wire for any second or future circuit) is not available in ENVIRO database.

**Table L-2. ENVIRO Modeling Inputs for the Environmental Effects Analysis – Conductor Height and Horizontal Location, Conductor Sag, and Conductor Phasing**

Segment/Configuration/Circuit		Phase (top to bottom/ left to right)	Horizontal Location (ft)	Vertical Location (ft)
Lattice Steel (Proposed Action is to build single circuit at this time)	N/A	N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
	Circuit (Looking north, right side circuit built and energized)	C	15	70
		B	16.5	49
		A	15	28
		Ground	10	80
H-Frame Wood	Circuit	A	-20	28
		B	0	28
		C	20	28
		Ground	-9.75	37.5
		Ground	9.75	37.5
Steel Monopole	Circuit 1	A	-14.5	66.2
		B	-16	46.7
		C	-14.5	28
		Ground	-10	77
	Circuit 2	C	14.5	66.2
		B	16	46.7
		A	14.5	28
		Ground	10	77

Note: The environmental effects analysis for electric and magnetic fields can be found in Section 3.20 of the Draft EIS.

**Table L-3. ENVIRO Modeling Inputs for Cumulative Effects– Projected Electrical Power Flows, Conductor Size and Type, and Operating Voltage**

	<b>Farmington</b>	<b>Western</b>
<b>Segment/Circuit</b>	Existing single circuit 115 kV	Existing single circuit 345 kV
<b>Conductor Number/Type</b>	One conductor 477 MCM 26/7 ACSR Hawk 0.858 inch (7/16 EHS for grounds)	Two conductors (18 inch separation) 1272 MCM 45/7 ACSR Bittern 1.345 inch (7/16 EHS for grounds)
<b>Current Loading (Amperes)</b>	1619	336

Note: The cumulative effects analysis for electric and magnetic fields can be found in Section 4.20 of the Draft EIS.

**Table L-4. ENVIRO Modeling Inputs for Cumulative Effects – Conductor Height and Horizontal Location, Conductor Sag, and Conductor Phasing**

Segment/Configuration/Circuit	Phase (top to bottom/ left to right)	Horizontal Location (ft)	Vertical Location (ft)
Existing Farmington Single Circuit 115 kV	Ground	7.75	36
	Ground	-7.75	36
	A	16	22
	B	0	22
	C	-16	22
Existing Western Single Circuit 345 kV	Ground	22	57.5
	Ground	-22	57.5
	A	30	30.5
	B	0	30.5
	C	-30	30.5

Note: The cumulative effects analysis for electric and magnetic fields can be found in Section 4.20 of the Draft EIS.